

PATENT APPLN. NO. 10/529,847  
RESPONSE UNDER 37 C.F.R. §1.111

PATENT  
NON-FINAL

REMARKS

Claims 1, 8 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (U.S. Patent No. 6,365,659; hereinafter "Aoyama") in view of Naylor et al. (WO 97/47675) and Kato et al., U.S. Patent No. 6,680,353 ("Kato"). Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama in view of Naylor and Kato as applied to claims 1, 8 and 13-18 and further in view of Uchida et al., U.S. Patent No. 6,670,030 ("Uchida").

Regarding claim 1 of the present application, the Office notes that Aoyama discloses certain of the elements of the polyester resin composition of the present invention but does not disclose the specific titanium compound contained in the composition, e.g., a titanium compound having an alkoxy group substituent which is a hydroxycarboxylic acid-system functional group and does not disclose the specific phosphorous compound, ethyl diethylphosphonoacetate, contained in the composition.

The Office cites Naylor as teaching that the reaction product prepared by allowing an alkyl titanate to react with lactic acid or citric acid is preferable for the production of film or bottle grade resin, because it allows the production of a resin with a low haze value and good color due to inhibition of titanium

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precipitation. The Office concludes that it would have been obvious to use the specific titanium catalyst of Naylor in Aoyama in order to obtain a composition with better haze and color.

Regarding the use of ethyl diethylphosphonoacetate, the Office cites Kato as teaching that ethyl diethylphosphonoacetate can be preferably used for preventing coloration and enhancing melt stability of a polyester resin composition. The Office concludes that it would have been obvious to use ethyl diethylphosphonoacetate in Aoyama in order to obtain a composition with good color and melt stability.

Applicants respectfully submit that the proposed combination of Aoyama, Naylor and Kato fails to suggest the specific combination of elements of the polyester resin composition recited in the claims of the present application and fails to predict the results of the specific combination.

Aoyama cannot satisfy the properties specified in claim 1 of the present application required for use as a magnetic recording medium that requires high surface smoothness. Particularly, in the invention of Aoyama, the composite oxide is a slurry and is added as a slurry as described in Example 1 (column 14, line 29). The use of such a slurry will not inherently satisfy the requirement of the polyester resin composition of the present application that

PATENT APPLN. NO. 10/529,847  
RESPONSE UNDER 37 C.F.R. §1.111

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"the number of titanium-containing particles having an equivalent circular diameter of 1  $\mu$ m or more is less than 100/0.02 mg."

In the present invention, a solution of the titanium catalyst is used to satisfy such feature.

On the other hand, if a reaction product prepared by allowing an alkyl titanate to react with lactic acid or citric acid is used as a catalyst as suggested by the Office, titanium precipitation may be inhibited. However, the number of titanium-containing particles having an equivalent circular diameter of 1  $\mu$ m or more in the polyester produced by this particular combination, will not necessarily be within the range specified in claim 1 of the present application.

The Office has provided no rationale supporting a position that a person of ordinary skill in the art would have selectively combined the inventions of Aoyama and so as to achieve a polyester resin composition which meets all of the elements of the claims and, in particular, containing a number of titanium-containing particles having an equivalent circular diameter of 1  $\mu$ m or more of less than 100/0.02 mg of the composition, to provide the castability, color, heat resistance, etc. of the resin of the present invention. The data of the application show that the specified number of titanium-containing particles having an

PATENT APPLN. NO. 10/529,847  
RESPONSE UNDER 37 C.F.R. §1.111

PATENT  
NON-FINAL

equivalent circular diameter of 1  $\mu$ m or more of less than 100/0.02 mg of the composition is material to obtaining a composition having good castability and a reduced number of dropouts. (See Comparative Examples 1 and 4 in Tables 1-1 and 1-2).

Moreover, since the inventions of Aoyama and Naylor are different from each other in objects, constitution and effects, a person of ordinary skill in the art could not have combined the inventions with predictable results.

Regarding the use of ethyl diethylphosphonoacetate, Kato describes that ethyl diethylphosphonoacetate is preferably used for preventing coloration and enhancing melt stability. However, the object and effect of ethyl diethylphosphonoacetate used in the invention of claim 1 of the present application are different from the object and effect of the same compound used in the invention of Kato.

Kato describes that ethyl diethylphosphonoacetate and other various phosphorus compounds have effects of preventing coloration and enhancing melt stability. On the contrary, in the invention of the present application, the ethyl diethylphosphonoacetate added has an effect of decreasing irregular particles. In particular, see Examples 1, 5 and 6 of the present application. The number of particles having an equivalent circular diameter of 1 mm or more

PATENT APPLN. NO. 10/529,847  
RESPONSE UNDER 37 C.F.R. §1.111

PATENT  
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per unit weight in Example 1 where ethyl diethylphosphonoacetate was used was far smaller than those recorded in Examples 5 and 6 where other phosphorus compounds specified by Kato were used. As can be seen from these examples, the invention of the present application is based on the finding unknown hitherto that ethyl diethylphosphonoacetate is excellent in inhibiting irregular particles. Such result could not have been reasonably expected from the prior art and, particularly, the proposed combination of Aoyama, Naylor and Kato.

For the above reasons, the proposed combination of Aoyama, Naylor and Kato fails to support the Offices case of obviousness under 35 U.S.C. § 103(a) and removal of the rejection is in order.

The rejection of claim 19 under 35 U.S.C. 103(a) over Aoyama in view of Naylor and Kato and further in view of Uchida depends on the propriety of the rejection of claims 1 and 18. Since the rejection of claims 1 and 18 is improper as explained above, the rejection of claim 19 must also fail.

The foregoing is believed to be a complete and proper response to the Office Action dated April 8, 2008.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of

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time. The fee for any such extension and any additional required fees may be charged to Deposit Account No. 111833.

Respectfully submitted,  
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